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## New species of *Actinotia* Hübner, [1821] from China (Lepidoptera: Noctuidae, Xyleninae, Actinotiini)

F. Q. Chen & D.Y. Xue

### Abstract

Two new species of the genus *Actinotia*, *A. subintermeidata* Chen & Xue, sp. n. and *A. furvusa* Chen & Xue, sp. n., are described. The adults and the genitalia of the genus from China are illustrated for all examined species.

KEY WORDS: Lepidoptera, Noctuidae, Xyleninae, Actinotiini, *Actinotia*, new species, China.

### Nuevas especies de *Actinotia* Hübner, [1821] de China (Lepidoptera: Noctuidae, Xyleninae, Actinotiini)

### Resumen

Se describen dos nuevas especies del género *Actinotia*, *A. subintermeidata* Chen & Xue, sp. n. and *A. furvusa* Chen & Xue, sp. n. Se ilustran los adultos y las genitalias para todas las especies examinadas de China.

PALABRAS CLAVE: Lepidoptera, Noctuidae, Xyleninae, Actinotiini, *Actinotia*, nuevas especies, China.

### Introduction

The genus *Actinotia* Hübner, [1821] consists of a small number of species which are characterized by a striking, longitudinally striate forewing pattern within which the reniform stigma is prominent (HOLLOWAY, 1989). It was once confused with the genus *Chloantha* Boisduval, Rambur & Graslin, 1836 for a long time (HOLLOWAY, 1989; POOLE, 1989; CHEN, 1999). FIBIGER (1990, 1997) redescribed both of them and treated *Chloantha* as a separate genus rather than the synonym of *Actinotia*. On the other hand, the genus *Radinotia* Beck, 1996 was synonymized as *Actinotia* by KONONENKO (2005). Then, the genus *Actinotia* was transferred from Amphipyridae (HOLLOWAY, 1989; POOLE, 1989; FIBIGER, 1990, 1997; CHEN, 1999) to Xyleninae by FIBIGER & LAFONTAINE (2005). For now, the genus is mainly distributed from North Europe to Southeast Asia. Five species are included in it: *A. intermediata* (Bremer, 1861), *A. polyodon* (Clerck, 1759), *A. radiosa* (Esper, [1804]), *A. stevenswani* Hreblay, Peregovits & Ronkay, 1999 and *A. australis* Holloway, 1989. Among them, *A. polyodon* and *A. intermediata* are reported as occurring in China (CHEN, 1999). After rechecking the hundreds of *Actinotia* adults from our collection, another two species are reported as new to science, *A. subintermeidata* Chen & Xue, sp. n. and *A. furvusa* Chen & Xue, sp. n.

### Materials and methods

The specimens examined are from the collection of the Institute of Zoology, Chinese Academy of Sciences (IZCAS). Photos of adults and genitalia were taken with a digital camera attached to a Zeiss Stereo Microscope and compiled with Auto-Montage software version 5.03.0061 (Synoptics Ltd). External and genitalic terminologies follow NICHOLS (1989), SCOBLE (1992) and CHEN (1999).

## Taxonomy

### *Actinotia subintermeidata* Chen & Xue, sp. n. (Figs 1, 5)

Material examined. Holotype, ♂ (Slide No.: Noct-00400), CHINA, Hubei: Xingshan, Longmenhe, 1300 m, 6-V-1994, coll. Li Wenzhu. Paratypes. Same data as holotype, 1 ♂ (Slide No.: Noct-00416). Gansu: Tianshui, Dongcha Linchang, Taohuaping, 900 m, 15-IV-2005, coll. Wang Xuejian, 1 ♂ (Slide No.: Noct-00426).

Description: Head. Frons round, brown; labial palpus porrect, brown, second segment elongate, ventral scales white, third segment short and small. Thorax. Patagia grayish brown, posterior fuscous; tegula grayish yellow, inner side fuscous; posterior with a tuft of fuscous apexed gray scales; ventral suffusing with gray scales, mid and meta tibia without sclerotized spines. Wing patterns. Forewing. Length 15–17mm; costa fuscous, grayish white below it; lower half of forewing covered with brown; a black stripe lies below lower margin of cell; basal half of inner margin covered with black; reniform patch pale brown, surrounded by grayish white, then a black line; veins beyond reniform patch covered with fuscous, more or less covered with black scales between veins; a series of obscure black spots from apical quartering of costa to apical trisection of inner margin; outer margin wavy; fringes brown mixed with pale brown; underside pale brown, with white long hairlike scales covered on discal cell; dark rufous scales between veins beyond discocellulars. Hindwing. Basal half grayish white, apical half fuscous; veins covered with fuscous scales; fringes white; underside with discocellulars line looks more clear. Abdomen. Pale brown.

Male genitalia: Uncus cylindrical and slender, apical half clothed with long, hairlike setae; tegumen broad; pleural sclerite a narrow strap extending from vinculum along ventroanterior margin of tegumen; transtilla a narrow sclerotized band laterally, larger dorsal to aedeagus; cucullus triangular, a row of stout setae forms a partial corona along apical half of outer margin; costa of valva raised medially; ampulla arising from apical half of valva, apical part lingulate, extending to dorsal of valva, the right one with an extra smaller process towards ventral margin of valva; clasper fingerlike, except the left one bifurcate at apex; succulus expanded, over dorsal margin of valva; saccus round; juxta shield-shaped; aedeagus downcurved and strongly sclerotized, a spinous plate and a row of stout spines present posteriorly, a small and a large projection at apical trisection, both with apex serrated; vesica without cornutus.

Female genitalia: Unknown.

Diagnosis: The species is very similar to *A. intermeidata* (Bremer, 1861) (Fig. 2, distributed from Asia (China, India, Sri Lanka, Korea, Japan)) by the mid and meta tibiae lacking sclerotized spines. In *A. subintermeidata* Chen & Xue, sp. n., cornutus is absent on the vesica, a row of stout spines is present and the larger projection is serrated apically on the posterior aedeagus. While in *A. intermeidata*, a small spine-like cornutus is present on vesica, row of spines is absent and the larger projection is bifurcated basally on the posterior aedeagus.

Distribution: China (Hubei, Gansu).

Remarks: The species seems to occur only in early spring at higher elevation.

Etymology: The specific name is corresponding to its sister species *A. intermeidata*.

### *Actinotia furvusa* Chen & Xue, sp. n. (Figs. 3, 6)

Material examined: Holotype. ♂ (Slide No.: Noct-00417), CHINA, Gansu: Wenxian, Qiujiaba, 2200–2350 m, 29-VI-1998, coll. Yao Jian (IZCAS).

Description: Head. Both frons and labial palpus covered with brown scales. Labial palpus porrect, second segment elongate, with brown ventral scales; third segment short and small. Thorax. Patagia and tegula grayish brown; posterior with a tuft of grayish brown scales, which apex fuscous; ventral with brown scales, mid and meta tibia with several sclerotized spines. Wing patterns. Forewing. Length 14mm; most of the area fuscous; reniform patch brown, surrounded by grayish brown, then with black

scales; a black stripe lies below lower margin of cell, another at basal half of inner margin; submarginal area pale brown with serrated black patch; outer margin wavy; underside pale brown, discal cell covered with white long hairlike scales. Hindwing. Pale brown; underside with blurry discocellulars and postmedial lines.

Male genitalia: Uncus cylindrical and slender, apical half clothed with long, hairlike setae; tegumen broad, pleural sclerite a narrow strap extending from vinculum along ventroanterior margin of tegumen; transtilla a narrow sclerotized band laterally, larger dorsal to aedeagus; cucullus nearly round, a single row of setae forms a partial corona along apical 2/3 of outer margin; costa of valva raised medially; ampulla spine-like, arising from apical trisection of valva, extending to ventral side of valva; clasper strong, stick-like, apex swollen; cucullus expanded, over dorsal margin of valva; saccus round; juxta lagenate, apex forklike; aedeagus sclerotized, a spinous plate and a spine-like projection present posteriorly; vesica with two stout spine-like cornuti.

Female genitalia: Unknown.

Diagnosis: The species is very similar to *A. polyodon* (Clerck) (Fig. 4, distributed from Europe to north China to Japan) by the mid and meta tibiae with several sclerotized spines. But the forewing of the new species looks darker, the ampulla is much larger and the cornuti is smaller than those in *A. polyodon*.

Distribution: China (Gansu).

Etymology: The specific name is derived from the Latin “*furvus*”, corresponding to the darker color of forewing.

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